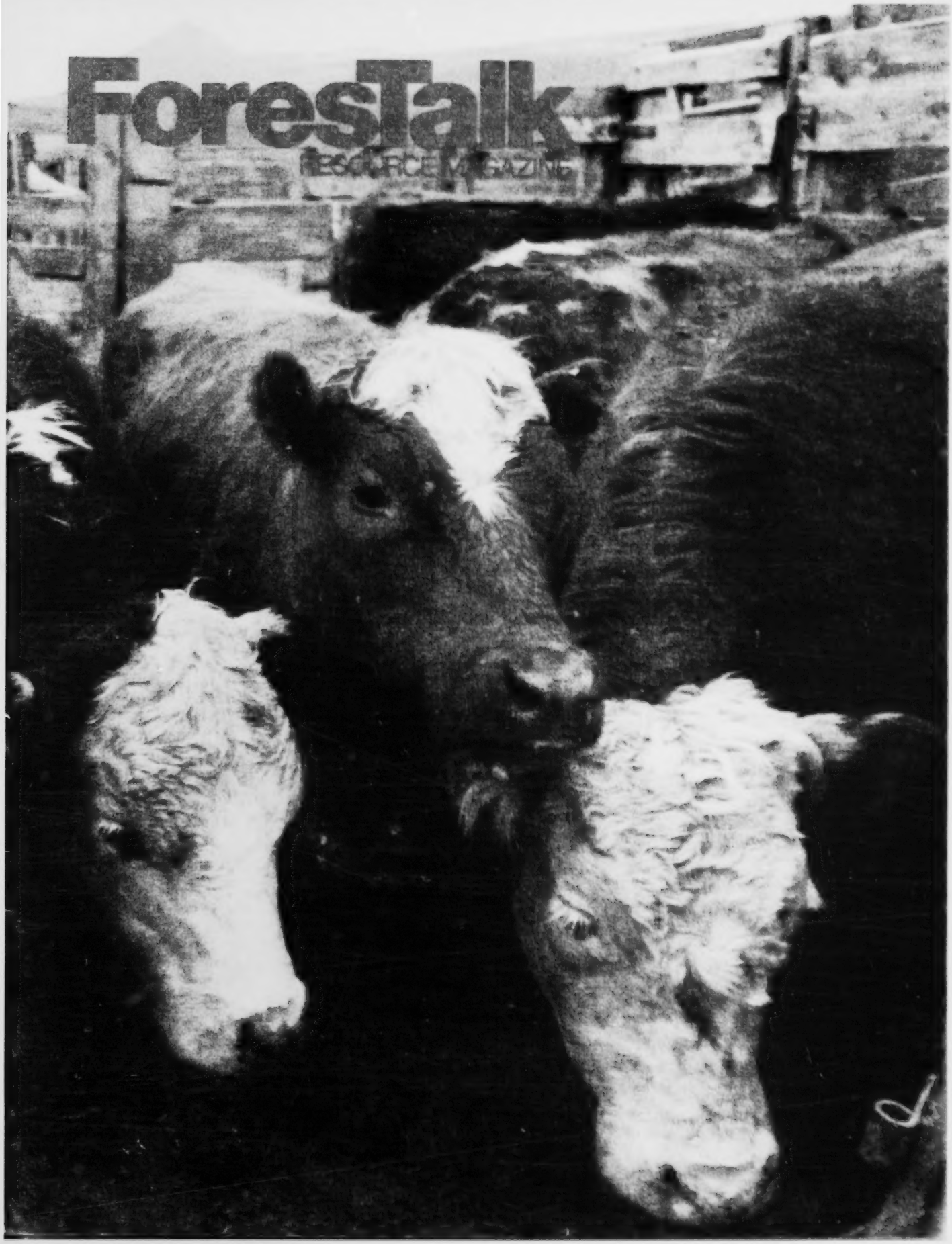
ForesTalk

RESOURCE MAGAZINE



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ForesTalk
RESOURCE MAGAZINE JULY/AUGUST/SEPTEMBER, 1977 • VOLUME 1 • NUMBER 3

This summer, families, friends and visitors will be travelling throughout British Columbia observing first hand the relationship the forest resource has with communities, wildlife, tourism, fish habitat, ranching, water supply, soils and industry. It has been said before, that if it happens in the forest, it happens everywhere. If this issue of ForesTalk has a central theme, it is this complex and often controversial partnership. Natural fires and insect infestations are part of this complex system, and we do our best to control them. However, people caused fires present additional problems which can have devastating effects. Be careful with fire this summer, and take the time to look around and appreciate nature, the forest, and everything it represents.

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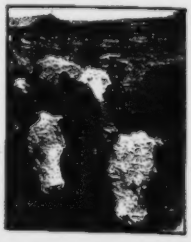


Cover photo by John Thompson.

During the summer months, it takes up to 100 acres of forest to support one cow and her calf.

To Grow Beef You Need Grass

by **Tony Gregson** *photographs by* John Thompson

It may come as a surprise to learn that almost one quarter of British Columbia is rangeland. There are some 23 million acres of cattle-raising country spread out over B.C. from the Fraser Valley to the Peace River—which makes it quite likely you could meet a cow while travelling in the woods.

That's where the whole problem begins as far as British Columbia's ranchers are concerned. Most of their rangeland is actually forested. In fact, the range services of the provincial government are a branch of the Forest Service.

There is little open grassland in B.C. Most of what there is occurs in the dry areas of the Interior, in the Thompson-Nicola Valley and the Cariboo. In this hilly country, the climate is too dry (only 10 inches of rainfall a year) in the valley bottoms and lower elevations to support trees. But once you travel up into the hills, at about 1500 feet the trees soon start coming back. Ranchers graze their cattle on the natural grassland for about two months of the year, during April and May just after the calves are born. During winter, cattle are usually fed silage or hay, some of which the ranchers are able to grow on their irrigated lands.

When the grass on the low ranges starts drying up, the cattle must move up to summer range in the forest where various grasses grow between the trees. Through June and July the cattle graze higher and higher in timber that gets increasingly dense. In the thick stands of lodgepole pine and balsam that occur up around 4000 feet, it can take up to 100 acres of forest to support one cow and her calf for the two months of August and September before the first snowfall drives the cattle back down the mountains.

Most ranches in B.C. consist of land owned outright and some leased. The summer range, however, which is forested land, is rented on a per animal unit basis (one cow and her calf) from the Forest Service through its Range Branch. Known as Crown range, the amount used by each rancher far exceeds the size of the home ranch.

That is where the dispute over the best use of clear-cuts comes in. To the uninitiated, clear-cuts are those large mountainside patches stripped of its trees by the logging industry. Trees are removed and the land left to either reforest itself naturally or quickly hand planted back into production.

Clear-cutting, the removal of all similar-age trees from within a given area, is the most common harvesting practice in the coastal forests, and it's becoming more common throughout the province. Last year, some 316,570 acres of forest were harvested with this method.

Since clear-cutting is only permitted at altitudes and in areas where the forest is naturally thick, ranchers would like to see more clear-cuts seeded to grass for forage. They've always done some seeding themselves, on old logging roads and decking grounds.

More Range Needed

The ranchers argue that they must have more range to maintain present levels of production, or even survive. Low prices everywhere for beef on the hoof in the face of rising costs have reduced ranching to a marginal investment.

In British Columbia, ranching is best suited to the raising of calves and yearlings (calves wintered over and sold in the spring) which are then sold to feedlots in Alberta and elsewhere for "finishing". If the B.C. beef industry is to grow, the only way is to raise more calves—and to do that, you need more forage. The B.C. Cattlemen's Association estimated in 1972 that extensive seeding of clear-cuts would increase available range by as much as 25 per cent.

According to Jim Milroy, Director of the Forest Service Range Branch, it costs between $10 and $15 per acre to seed a clear-cut by airplane. Although his branch advocates the policy, there is no intention, he says, to cut back on forest land. The clear-cuts will continue to be planted with young trees, and although the grass grows quickly, the trees eventually shade it out in about 10 or 15 years.

Change in Attitudes

The attitude of the forest industry towards the idea has undergone considerable change. Not long ago, they wouldn't even discuss the idea. But in recent years it has become apparent that forested rangeland is multiple use. Not only must the needs of the forest and ranching industries be considered, but wildlife and recreation also has a share.

The forest industry long feared that if the grass didn't get the young trees, the cattle would. It was thought that the grass would choke or shade out the tree seedlings while the cattle might find lodgepole pine or Engelmann spruce, the species usually planted in the clear-cuts of the Interior, a tasty browse. Ranchers and others also couldn't help detecting a certain professional suspicion of anything that didn't grow bark.

"Clear-cuts," as one rancher put it, "are man's way of managing what nature did with fire." Historically, the grasslands of the interior have always varied in extent depending upon frequent wildfires which not only burned off the grassland and refertilized it, but also laid waste vast tracts of forest. Nobody knows just how much grassland there was before the advent of white man, but everyone agrees that modern fire prevention policies have interfered with a natural cycle. B.C.'s rangeland is forest country; allowed to grow back, trees will gradually cover the hillsides again.

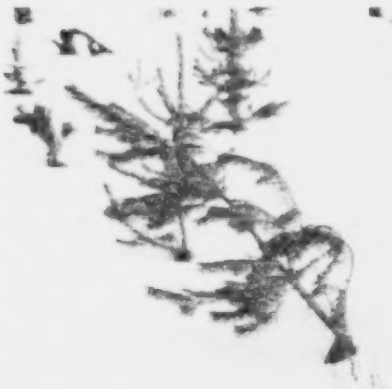
Fire also thinned out the forest canopy, allowing grass to grow more abundantly.

The result is both the grassland and forest range for cattle and wildlife has been greatly diminished over the years. The only answer, the ranchers say, is greater co-operation between them, the Forest Service and the logging industry.

Experiments have proved that rangeland can be improved by using fertilizers and re-seeding areas with tame grasses. Both alternatives are very expensive compared to seeding freshly logged clear-cut areas.

British Columbia's $42 million a year beef producing industry utilizes 23 million acres of rangeland, and the largest portion is forested.

(photo right) Cattle have pushed one or two of these young lodgepole pines planted as part of the Community Lake clear-cut grazing experiment, otherwise damage has been negligible even with some overgrazing. (photo below) Trevor Evans, left, Forester for Balcor Industries, listens to rancher Frank Devick make a point about the clear-cut at Community Lake, near Kamloops, where Devick's cattle have been involved in grazing experiments. Both feel seeding the clear-cut is beneficial but much more cooperation between forestry and ranching is needed.
(photos far right, below right) The needs of the ranchers are related to forest access and actual harvesting techniques



Experiments conducted near Kamloops on several clear-cuts that were planted with trees and seeded with grasses indicate the forest industry's fears may be unfounded.

Attention has focused on one clear-cut in particular, Community Lake, on Crown range about 20 miles from Kamloops, at Heffley Creek. It is used largely by a single rancher, Frank Devick, whose father started the ranch in 1906. Today, Devick grazes 350 head (excluding calves) on 2500 acres of his own land, most of which is forested. Including the leased Crown range, he estimates his cattle range over 20,000 acres.

'Community' was logged in 1967 by Balcor Forest Industries, a Kamloops based firm, and the area was scarified by bulldozers dragging a ball and chain, before it was burned in 1970. In the spring of 1971, it was planted with Engelmann spruce and lodgepole pine. That fall, it was seeded with tame grasses: orchard, crested wheat, and timothy (which occurs naturally or artificially depending on how you regard horses. A lot of timothy was fed to horses when they were used to haul logs in earlier days.) In 1973, Dr. Alister Maclean, of the Federal Department of Agriculture Research Station, and Bruce Clark, of the Forest Service Research Division, began a series of experiments.

The clear-cut was divided into three fenced fields of equal size. Of the seeded fields, one was grazed normally, the other heavily until over 70 per cent of the forage was gone.

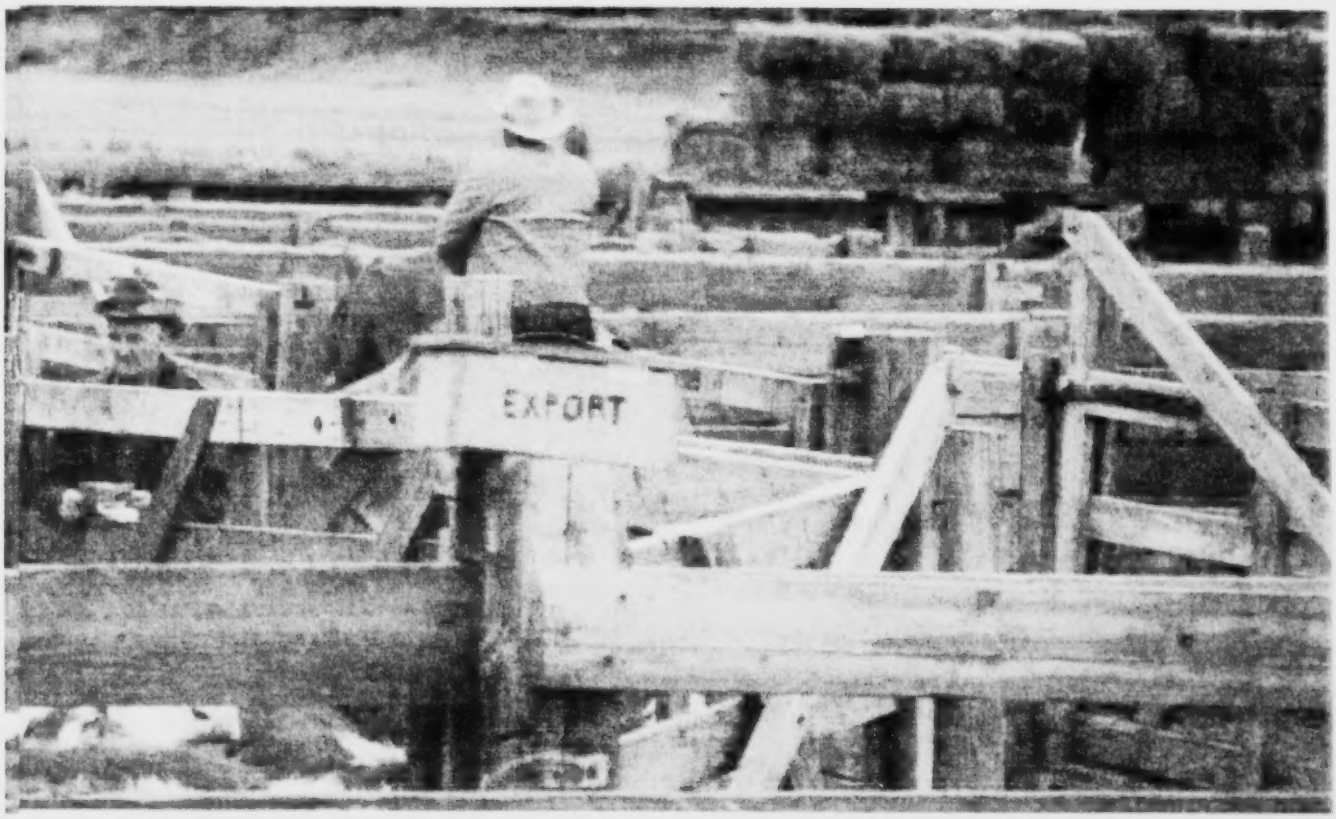
It has been found that the cattle do negligible damage to the trees—apart from leaning on one or two. The grasses, chosen because they do not have a creeping root system, do not retard the trees. An unexpected benefit for wildlife has been the grazing of the willow and poplar shrubs that seeded themselves. These have been kept low and bushy by the cattle, whereas in the ungrazed area, the shrubs have begun to grow too tall for the area's wildlife in a matter of only a few years.

There are still, however, many questions to be settled before a policy of regularly seeding clear-cuts in ranching areas is widely accepted.

For one, the Forest Service favours natural regeneration as infinitely cheaper than $100 per acre for planting. Since natural regeneration is much thicker, this means less forage. Dr. Maclean points out, however, that the wild pine grass native to the forests is actually more competitive than tame species of grass. There is also the problem of thinning stands of natural regeneration. Cutting is very expensive, and any herbicide powerful enough to kill a tree would kill the grass, too.

Wildlife biologists also have their doubts. At Community Lake, deer and even moose have appeared that rancher Frank Devick can't remember seeing in years. But, as David Low of the Fish and Wildlife Branch points out, "Wild animals starve to death on a full stomach." The cattle, by nipping off the buds on willow and aspen, deprive the deer and caribou of 50 per cent of the plant's food value. Cattlemen, Low concludes, should improve their home ranges so that cattle won't eat browse needed by wild animals in the fall. (The ranchers, on the other hand, swear deer eat grass.)

Then there's the ranchers themselves. "You'll have to manage where you didn't manage before," comments Devick. Cattle prefer the clear-cuts and there have been problems where a herd has been left to run too long. At another experimental clear-cut on Martin Mountain, near Kamloops, the cattle not only ate most

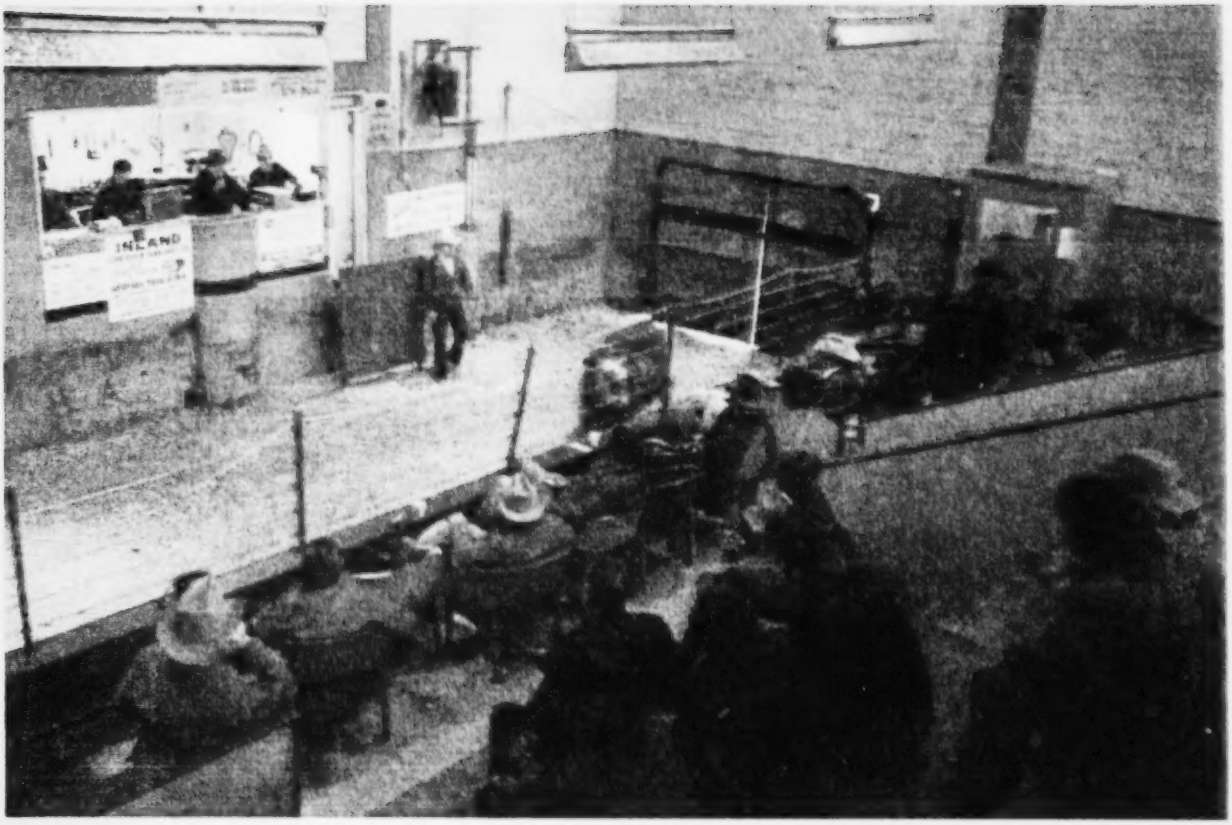


of the wildlife browse, but trampled a high percentage of the trees.

A change in Forest Service policy announced in March may foster more co-operation from ranchers and make some form of long range management possible. Until this year, permits were renewed annually. While in practice the rancher almost always got the same range year after year, they argue that didn't mean much at the bank. Now permits can be granted for up to 10 years.

It all depends, comments Alf Bawtree, a range specialist for the Ministry of Agriculture at Kamloops, whether a range permit is interpreted as simply the rental of so many acres per animal unit, or a guarantee of so much forage—just as timber companies are guaranteed a certain annual cut. Ranchers, Bawtree believes, need the same sort of commitment given the forest industry if long term management is going to work. Who knows, ranchers may one day hire agrologists?

That still leaves the big question of who gets to do what. The answer to that one, says Trevor Jeans, Vice-president and forester for Balcox



Forest Industries, is co-ordinated land management under a single body. He knows what he means: there are 14 commercial fishing camps and 4 ski resorts on licences held by the company in the Kamloops area—and that's not counting ranchers.

Jeans feels the provincial government could be more efficient. "The problem is," Jeans says, "those assessments that we make collectively among ourselves and probably every day, each and every government office makes separately."

Bill Stewart, President of the B.C. Cattlemen's Association and another Kamloops rancher, echoes the same complaint. "It always bugs me," he says, "they spend so much on research and it is already researched elsewhere, in very similar circumstances." Stewart cites Oregon as an example, where he says in some areas the obligation to seed the clear-cut with grass is written into the timber licence.

Even if the seeding of clear-cuts should become a widespread policy, there will still be plenty of wrinkles. The decision to seed must be made on a site-by-site basis, and it is not certain which types of grass are best or when they should be planted. ☐

When you see fire,

Phone!

Forest fire damage can be drastically reduced through an alert public. If you see smoke or fire in a forested area this summer, contact the closest Ranger Station and action will be taken immediately to stop the destruction. If you have difficulty locating the Ranger, phone our fire hot line through the operator.

Dial "0" and ask for Zenith 5555.

Letters to the Editor

Letters to the editor provides an opportunity for our many readers to discuss topics arising out of ForesTalk, its contents, its aspirations, and its areas of interest. Letters for publication must carry name and address. Views published are not necessarily endorsed editorially.

After reading the "Insect Invasion" in your April issue, I started to think about the area we live in, the Kleena Kleene Valley. We are slowly being surrounded by the advancing bark beetles. We are sitting on a time bomb! The trees are turning brown and the needles are starting to drop off. This appears to be a dry year—what about the fire hazard? Will the Kleena Kleene Valley be barred to tourists this year to minimize the danger of fire?

J.C. Lovering
Kleena Kleene, B.C.

Mountain pine beetle attack and spruce budworm infestations are severe problems the Ministry is experiencing over large portions of the province. In nature, beetle attacks are often followed by fire, and it appears this is where your concern is. The Ministry is very aware of the high fire hazard in your area, and will be taking special precautions, but is not planning any special closure of the area.

Editor

. . . we were very interested to learn the cause of the reddish forest cover in the Fraser Canyon was the spruce budworm. Also, the article on clear-cutting and management strategies was helpful. I had always thought clear-cutting was ugly and wasteful, but the point is well made that it can create healthy new growth in place of mature stands.

J. Mulsbury
Surrey, B.C.

Until reading your April issue of ForesTalk, especially the article by Gord Price, I was unaware of the importance forestry plays with Vancouver Island's water resources . . . more information of this nature is required to fully understand our total forest resources.

R. Moss
Victoria, B.C.

As a conservationist and one who also appreciates the need for a stable economy in B.C. and Canada, I find your magazine both relevant and informative. I am so thankful we receive 'Forestalk'. I have often searched many times for the information you now provide . . .

Mrs. R. R. Reader
Vernon, B.C.

The topics dealt with in Volume 1, No. 2 were all of interest to me and I think the magazine is well worthwhile. The only article which I found hard to accept was "A Clear-Cut Issue." Why do we foresters have to be so dead set against the existence of old-growth stands? Why do we repeat the old succession story when we really only talk in terms of mining a resource? It is about time we stopped trying to convince the public that all we are doing is "getting rid of all the old timber that is rotting away causing untold problems to recreation, protection, game management," etc. Why can't we just admit that we need to cut timber for various purposes and that clearcutting is one way to harvest and the "only way" to harvest pioneer species?

A. K. Helium
Associate Professor
Department of Forest Science
University of Alberta

. . . most impressed with 'Forestalk'. We read it cover to cover the day it arrives.

Since forestry plays such a vital role in the lives of all British Columbians, we should make every effort to learn as much about it as possible, and hopefully better understand its nature and complexities.

Mrs. E. Shkurhan,
Richmond, B.C.

I would like very much to be placed on the mailing list for your magazine. Truthful discussion of the issues concerning the forests and their future is always welcome.

David Huggett
Port Alberni, B.C.

Looking Forward.

Like G. F. Peake of Victoria (letters to Editor—April Issue), I am concerned with streambank protection. This goes back some 20 years when the Prince Rupert Forest District and Federal Fisheries Department, District 2, exchanged maps showing all the salmon rearing/spawning streams. The agreement was for suitable protection clauses to include in all timber sales/leases where salmon were concerned, to preserve the streams from logging abuses. This agreement extended several years later to the Vancouver Forest District. I left the Federal Fisheries Department in 1960, so I am not sure what happened after that date. I do feel that neither government agency, the Forest Service or the Federal Fisheries Department could supply adequate personnel to ensure the protection clauses were honoured. I look forward to your article on this subject in the future.

I. W. Stokes
Terrace, B.C.

As a member of the boating public in coastal waters, I for one would like to see Forestalk research and report a factual study of logging and booming practices, that result in debris and log loss to the detriment of our beaches and waterways, as well as creating serious marine hazards.

T. R. Hanna
Gabriola Island, B.C.

The Black Bear article by E. K. Lemon is delightfully informative and I'll look forward to future Forest Habitat articles. Perhaps some mention could be given also to feathered creatures, with emphasis on the endangered species.

W. W. Hines
Prince Rupert, B.C.

In view of the increasing concern over energy conservation, I fail to understand why industry hasn't been encouraged to utilize 'scrap wood' and 'slash' materials from its operations, to produce power for its pulp and sawmills. Also, with the sharp rise in fuel costs, it could be a help to many families if access to slash material were made, providing a source of free fire wood.

G. Bryan
Penticton, B.C.

We are preparing an article to illustrate energy conservation, new uses for wood, and programs where government and industry are working together to encourage the use of wood now burned as scrap. The Ministry of Forests, through many Forest Service Ranger Stations, have a "free fire-wood" program, although not all areas have 'slash' supplies. Contact the Ranger Station nearest you for more information, and ask for a "Free Fire-wood" brochure.

Editor

With their very successful "Smokey the Bear" public relations programs, industry, government and forestry associations have made the public very aware of the many dangers of fire. Isn't it time the research information now available, is published to show that fire can be beneficial. Fire can be an important preventative to dangerous fuel accumulations, disease and insect problems, deterioration of range, and watershed yield. Certain tree species and plants depend on fire for survival and health. This complex topic needs examination, in depth, to show both the beneficial and harmful effects of fire.

W. Davis
Vancouver, B.C.

This very subject is being researched in preparation for an article in our April issue.

Editor

Forestalk is an important link between industry, environmentalists, government, and the public. I would hope to see a feature article on the planned McGregor River Dam and Diversion east of Prince George, especially in terms of how much timber will be effected and whether the local mills would be capable of handling it on schedule. There are growing numbers of citizens who are concerned about this project, and to date very little information and few reports have been made available.

R. A. Borsato,
Quesnel, B.C.

. . . Increase Circulation.

Forestry is basically the business of using our forests to the best advantage, whether it be for recreation or lumbering, conservation or economic exploitation. This still seems to be an issue which remains clouded in the collective mind of the general public. Forestalk helps to put the many aspects of forestry in proper perspective.

In this associations' brief to the Royal Commission on Forest Resources, we suggested that the many purposes to which our forest can be put to good use be communicated to the public via the Forest Service. If such is not already the case, we would suggest that your magazine's circulation and use be promoted throughout the province's educational institutions with an occasional article directed at and for the consumption of very young readers.

Colin Fraser
B.C. Independent Logging Association
Victoria, B.C.

Readers Respond!

Your article on the Stein River basin states that 'only 100 people visit any part of the basin each year'. Isn't this the way it should be in a true paradise? Let's keep it a naturalist's paradise!

Even though most people will never see this area I feel we could still be affected by its being put to multiple use. Who understands limited development, until after it has happened?

I. E. Richey
Victoria, B.C.

Perhaps you have not noticed that more and more people, today, are capable of enjoying an area where "the headwater lakes are still a two day hike away." One of the great charms of the Stein is that it is still a reasonably accessible wilderness and yet not too accessible. Challenge remains. Protect the valley with another Moratorium until the present generation of young people who are learning to enjoy it can make a decision on its future.

Ioan Greenwood
Hope, B.C.

. . . multiple use is the only way to manage British Columbia's natural resources. I feel there are far too many people in this big empty, beautiful province who look upon it as their own private preserve, to keep for their use only. This province can support far more primary and secondary industry, but it needs the people's support to do it.

D. Smith
Stewart, B.C.

. . . we feel your article on the Stein River Basin (April issue) was unfortunately inaccurate in a number of respects, and this has aggravated a highly political issue. Forestalk can play an important role in informing the public fairly of issues of importance. We hope to see it develop in that direction. The Stein article would be a good point at which to demonstrate your publication's good faith in objectivity as a goal.

Roger Freeman,
Chairman,
Recreation and Conservation Committee,
Federation of Mountain Clubs of British Columbia

Your article "The Stein Basin Study" was extremely biased. It misrepresents the recommendations of the government study—in fact this study states, "It is important to stress that at this time no final commitment be made on resource management."

The study recommends that the Stein timber be removed from the calculation of the annual allowable cut for the larger forest (Botanie) management unit until such time as it is economically viable to log; also that development of mineral claims be prevented until a full resource development commitment is made to forestry.

In other words, for the present time, the government study recommends a reinstatement of the moratorium on logging and mining in the Stein River Valley.

Dr. R. Stace-Smith,
Conservation Committee,
Federation of British Columbia Naturalists

It's obvious, from the many letters we have received, that a great deal of misunderstanding still exists regarding the "Stein Valley" issue. Consequently, we're taking a second look at the Stein. Look for it in our October issue.

Editor

MOVING?

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The Talk of SMITHERS

by **Cameron Young**
photography by Peter Robin

Until recently, few residents in the Northern B.C. community of Smithers bothered to question the impact of logging on the landscape or ecology of the area. And smoke billowing from the local sawmills, if given any attention at all, was seen simply as the typical symbol of economic prosperity. But during the last decade things have begun to change around Smithers. Today, many people have begun to talk seriously about the effects of the logging industry on the town—and not necessarily from the same point of view.

The debates began back in 1969 when Joe L'Orsa and Harry Kruisselbrink presented some strong opposition to a proposed pulp mill in the area. Then the issue became a plywood mill. When the Environment and Land Use Committee Secretariat was active in the Smithers area a few years ago, it wound up acting as an environmental referee. Finally it succeeded in zoning the Babine Mountains to accommodate the various demands put on it by industry, the recreationists and the need for conservation.

And it wasn't that long ago that the town council, on the advice of the Forest Service, thought it a practical idea to apply for a tree-farm licence and possibly sell the timber off the scenic face of Hudson's Bay Mountain, the hallowed landmark of the area.

That was the last straw for a lot of the residents, for people like biology teacher Dennis Clark who moved up from Salmon Arm seven years ago.

"It was then that I became concerned for the lack of consideration of values other than logging," he says. "I do a lot of hunting—which is really just an excuse to get up into the mountains—and I was becoming very aware of

The suggestions to log the scenic face of Hudson's Bay Mountain started the entire Smithers Project.

the general lack of thought given to the scenic values of the forests. But the scenic values are one of the reasons why many of us are here at all."

The Mayor eventually resigned over the plywood mill issue, the mountain face is still intact, and Clark has sustained his concern for his surroundings. Currently he is one of the dozen people who are active members on the Smithers Forest Advisory Committee.

And that is some committee. The members are all volunteers, and they have been meeting every Tuesday night at the Ranger Station ever since they answered a call from the Forest Service at a town meeting last July.

What they were invited to do, and what they accepted with evident enthusiasm, is to advise the Forest Service on what the public thinks should be provided for in the forest development plan. The area under study is the 1.4 million acres of forests and mountains around Smithers known as the Smithers Public Sustained Yield Unit.

"Tom Waterland (B.C.'s Minister of Forests) would be hard-pressed to find a better advisory committee if he went looking for one," says Jack Wertz, a committee member, rancher-realtor, and past president of the Chamber of Commerce. "We have three people with doctorates, four masters, and I don't know how many bachelor degrees. We have specialists in geology, economics and planning, the best chartered accountant in northern B.C., and one of our members is an excellent researcher."

But knee-deep in degrees or not, the committee couldn't claim to speak for the people of Smithers unless it had a broad representation from the community—and that's precisely what it does have.

The three major logging operations in the Smithers PSYU—Northwood, West Fraser and Groot sawmills—are all represented.

Joe L'Orsa is there, along with other environmentalists from the Society for Pollution and Environmental Control (SPEC). Harry Kruisselbrink isn't there, but he's now one of the town aldermen.

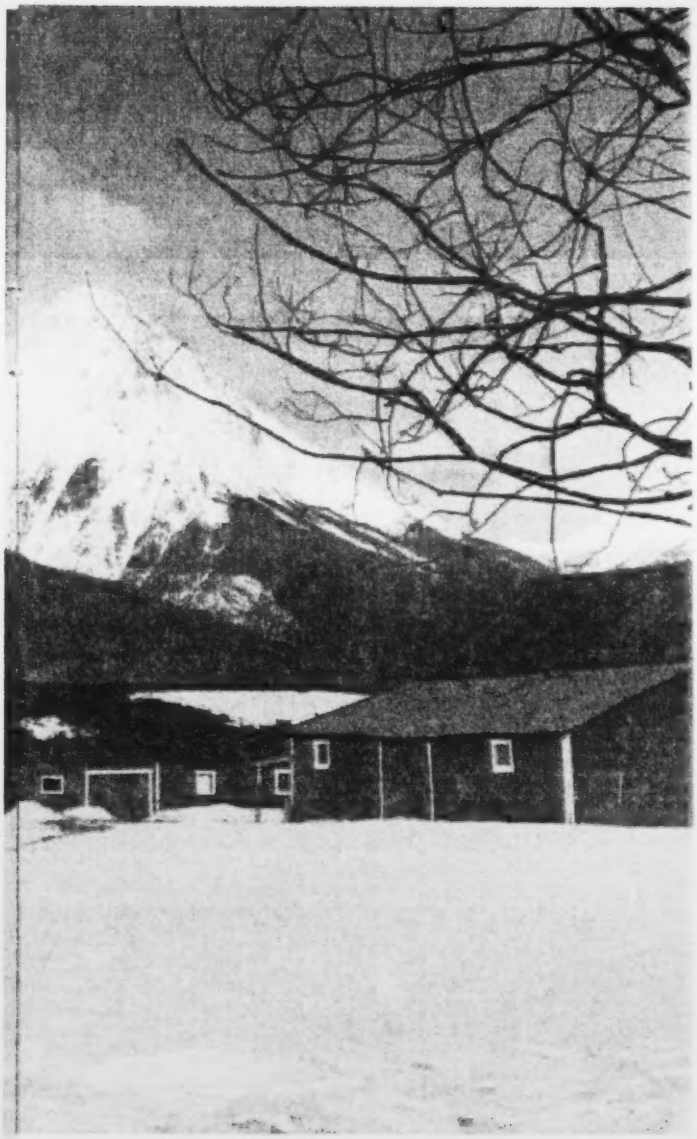
Ron Becker, forestry supervisor for West Fraser, admits to having been a little leary when he first started attending the committee meetings.

"When the committee started out I thought it would be just another hurdle for industry, so when I began attending meetings it was merely as a representative of my company. But now I go as a citizen of Smithers. I've lived here 15 years, I intend to raise my children here, and I don't want to see the whole place logged out either."

"We all have to live in this area," says Richard Overstall, former president of SPEC. "And what all of us really want is for Smithers to maintain a viable forest economy while protecting the integrity of the ecology."

"In the long run you have to work within an eco-system. Good long-term ecology is good long-term economics."

And that is something the environmentalist and sawmill owner can readily agree on.



One of the Forest Service's first areas for intensive public involvement, the Smithers Public Sustained Yield Unit is perhaps the most successful

"All of us on the committee share a mutual goal," says Dick Groot. "We want to conserve the forest so we can harvest it on a continuous basis."

His sawmill turns out 40 million board feet of lumber a year, and it gets shipped as far as Ireland and Texas. To do that he has to cut down trees, but that's what provides jobs to people in the community, to people like Richard Overstall. Another committee member, Mike Morrell, also works in the mill.

But Groot is concerned that current cutting practices may not be good for the forests over the long term.

"Right now we are high-grading our forests, overcutting sawmill timber but not taking out the lower-grade wood. Soon we'll have to make better use of that part of the forest we do log."

"You know?" he says, grinning warmly, "I'm beginning to think I'm an environmentalist myself."

Groot's presence on the committee probably adds to its credibility in the community, because when it comes to planning forest use, Groot has the most to lose. Unlike Northwood or West Fraser, Groot's is a locally owned operation. His complete investment is tied up in the Smithers PSYU.

Given those circumstances, Groot's views are likely to be taken seriously by both the Forest Service and most of the community. And as alderman Ted Taylor says, "what Dick Groot tells you is the feeling of the people."

The formation of the public advisory committee is all part of a new Forest Service project to develop resource planning on a larger scale than it has done in the past. The Forest Service now intends to develop resource plans at the management unit, or PSYU level, and sub-unit or folio plans only in the most critical operational areas.

This new approach to planning, as well as involving consultation with the other resource agencies and industry, also calls for the public to get involved in the planning process. And that's how the Smithers committee came into being.

Smithers is the first PSYU in the province to develop this kind of a plan, and zone forester John Wenger is responsible for co-ordinating all aspects of the plan. Like a lot of people familiar with the work of the advisory committee, Wenger says he is impressed with its dedication and enthusiasm. But then, for the residents of Smithers there is so much at stake.

Smithers, unlike Terrace to the west or Houston to the east, has a stable economic base.

And that means it has correspondingly few social problems. Its main income is derived from logging, but mining is also very important. The ranches in the valley export beef to Alberta, the town of 3,500 people acts as a service centre for about 20,000 others in the area.

Smithers is a regional government centre, and its natural surroundings provide excellent recreational opportunities.

Slow, controlled growth, without the characteristic "boom or bust" cycles of other northern towns has set Smithers apart from its neighbours.

"This slow growth just seems to have happened by accident," says Tim Toman, chairman of the advisory committee. "But we now want to keep it that way. It has reached the point where we not only question what kind of industry we may want for this town, but if we want any new industry at all."

It takes a moment or two to realize that it is not the least bit off the topic for the chairman of the forest advisory committee to be talking about industry. His committee talks about everything related to Smithers, because everything, in some way, is tied to the forests.

The town and people are different. Slow, controlled growth, has set Smithers apart from its northern neighbours.

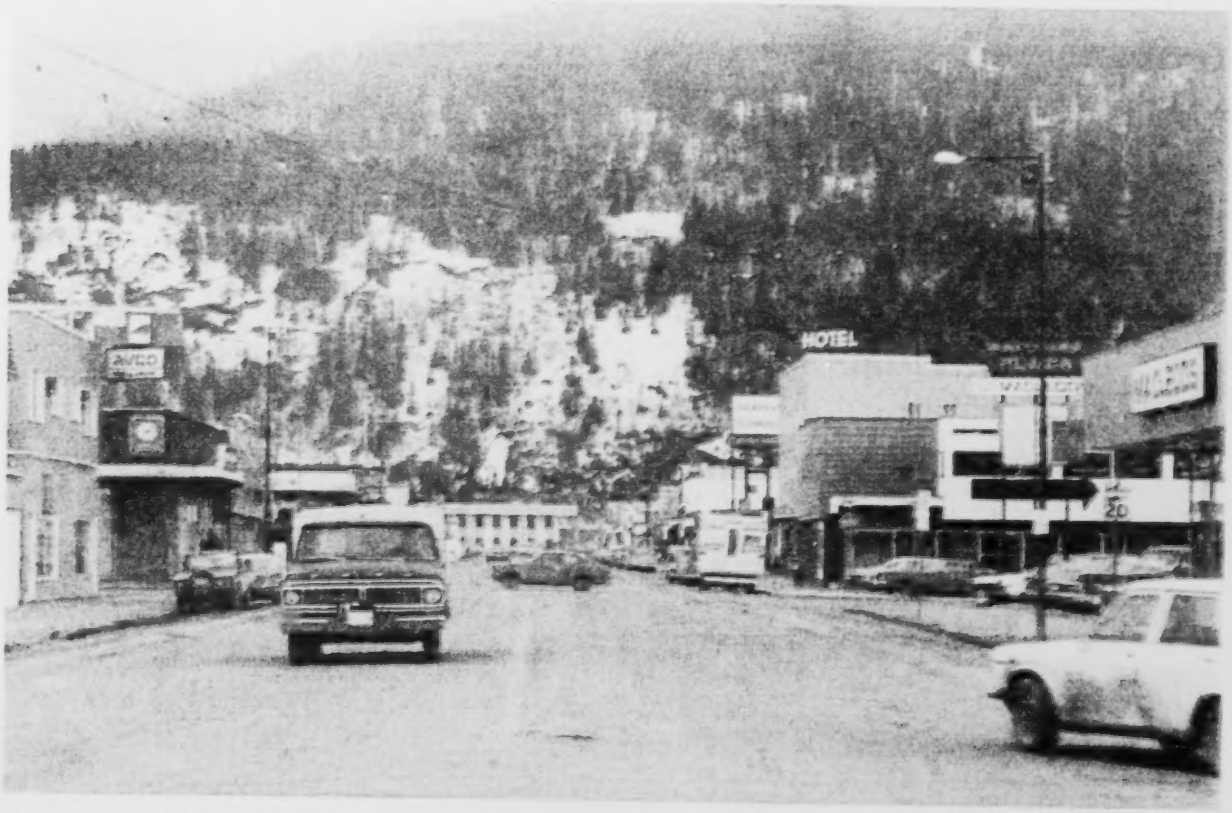
Slow, steady, long-term growth is also the official objective of the Smithers town council these days, so the committee is not about to find itself at war with the mayor.

"Indeed, I want to see steady, normal growth in Smithers," says Mayor Fred Shortreid. "And I sympathize with the committee. It has to strike a balance between damage to the environment and the benefits of developing that environment."

A lot of people, including committee members, thought the committee would have completed its recommendations to the Forest Service long ago. But the more the members looked into the question of integrated land-use planning, the more complicated it became. And they don't want to leave one stump unturned. They all agree that the committee is only as effective as they make it, and they want to make it as effective as possible.

Their Tuesday night meetings are spent studying all aspects of forestry, its related industries, foreign ownership, the aesthetics of logging, recreation, the current rates of harvesting the forest, anything and everything that has to do with the long-term economic and social well-being of the community.

All these components will have to be care-



fully digested before any recommendations can be made. Ultimately, however, they will assist the Forest Service in setting the timber harvesting level and designating the location and conditions under which timber may be cut.

Members admit that when it finally comes down to specifics there could be some deep differences of opinion, but they hope that somehow they will be able to work them out.

Of course, there are some people in town who feel those kinds of questions should be answered solely by the Forest Service, that a citizen's committee has no place telling experts how to run their show. Frank Parker is one of these.

He runs the Ford dealership in town, and says quite frankly: "I don't think the Forest Service needs any public input. They are trained in their field and know what to do."

Parker attended the first ten meetings of the committee, in his capacity as president of the snowmobile club. But he says he met too many environmentalists for his liking, people he had clashed with on other occasions over the issue of snowmobiling. He never went back.

Still, Parker's attitude seems to be the exception. People who are aware of the committee's existence generally are in favour of what it is doing, but certainly not everyone in town has heard of it.

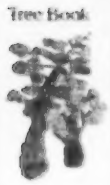
Despite the numerous newspaper articles describing the committee's operations, a survey on the streets of Smithers turned up only a handful of people who knew about it. But there are plans to change all that. As soon as it has finalized its list of recommendations the committee intends to present them for discussion at a public meeting.

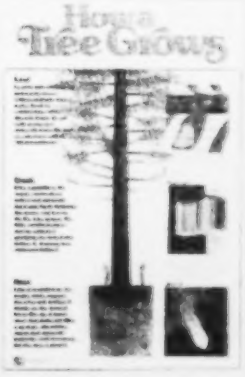
But after all that work, of perhaps a year of studying all the options available in planning for the future, will the Forest Service listen to what the committee has to say?

"It would be an exercise in futility if we didn't," says District Forester Al MacPherson. "Of course we take the committee seriously. They have spent a lot of time and energy on the project."

Oh yes. There's one more thing. The committee intends to keep right on meeting, even after the recommendations have been made and the Forest Service has completed its plan for the Smithers PSYU. That's so they will be able to monitor just how well the plan may be working.

There is no question about it. The Smithers Forest Advisory Committee takes its work very seriously. ◻





Conflict or Compromise?

by **Gord Price**
photography by Jim Challenger, Rob Salmon, John Thompson

The most productive, accessible and conflict-ridden resource zone on Vancouver Island is the 'east coast'. With its mild winters, low elevations, diversity of habitat and agreeable terrain, this area offers the greatest challenge and the most intractable problems to the Island's resource managers.

You couldn't find a grizzly bear or a mountain goat on Vancouver Island even if you wanted one. Nor is there a single porcupine, caribou or moose. And there's a complete absence of skunk.

The Island is however, the only home for several unique sub-species of wolf and marmot, and the Roosevelt elk long ago gave up its mainland habitat to swim across the straits.

But the centre of attention is the Blacktail deer. This ungulate flourishes so well in this habitat that half of British Columbia's Blacktail harvest is taken from Vancouver Island valleys. Naturally, the Ministry of Recreation and Conservation's fish and wildlife branch devotes much of its time and attention to the Blacktail and its habitat, collecting statistics from hunter surveys, providing recommendations to loggers and foresters, and formulating programmes to maximize this living resource.

From a wildlife manager's point of view, Vancouver Island breaks down into five zones, roughly comparable to deer and elk productivity. These zones pretty well match up with what the ecologists call biogeoclimatic zones, reflecting the interaction of plant and animal life, geography and climate.

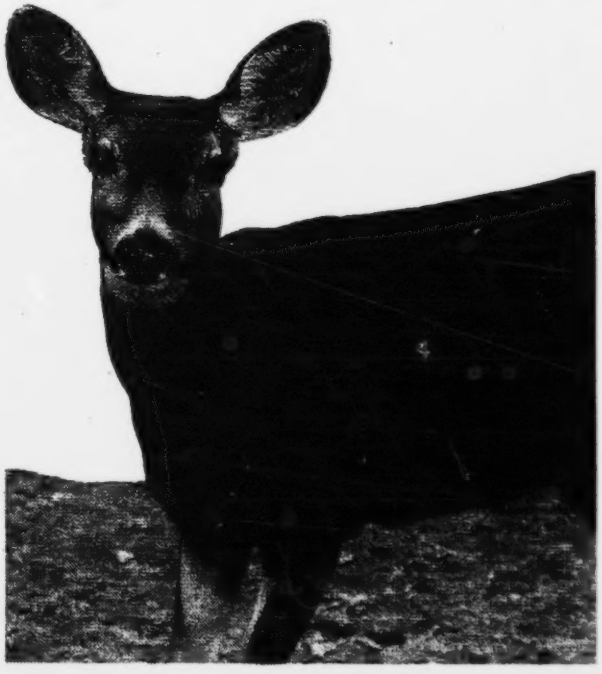
Working out of Nanaimo, The Fish and Wildlife Branch concentrates much of its energy on deer and elk habitat along this coastal plain, partly because other animals will prosper in a similar setting but mainly because deer is the primary 'consumptive resource' used by the people the branch serve. Increasingly, wildlife is being valued for its non-consumptive return as well, where the only shooting is done with a camera.

Either way, the importance society attaches to wildlife is largely subjective, which often makes comparison with other more worldly resources, like timber and minerals, impossible in economic terms. If an acre of spruce or Douglas-fir is worth $20,000, how much area is it reasonable to leave in order to maintain mature stands of trees for the winter habitat of a dozen elk?

In fact, it is this debate over the maintenance of mature stands of timber for wildlife that generates the greatest conflict among wildlife and forestry resource managers. Recent research projects, for instance, have established that relatively high deer populations existed under mature canopies on the east coast of the island before these forests were logged. The branches of these trees aged over 120 years provided protection from the snow, a route of escape from predators, and a food source called 'arboreal lichen'. The understory beneath, while open, was less productive for forage than that of a new, younger forest.

Consequently, the initial harvesting of mature forests resulted in an increase of deer due to the sudden abundance of forage and also to an increased density because of the smaller remaining habitat, reflected in an increased harvest for hunters who were able to use the same logging roads for access that opened up the forests in the first place.

But as logging progresses, the role of mature timber becomes a critical factor, for it provides that all-important winter range. The major limiting factor for deer and elk survival is the winter climate, particularly magnified as elevation increases, since the shelter provided by these stands of large, protective trees is necessary to reduce energy losses and for modifying snow depth and crust conditions. But as the elevation



(opposite page)
Thinning increases ground cover and visibility, both necessary conditions for wildlife habitat.

increases, the quality of timber declines while the costs of gaining access rise. The need to remove as much of that mature timber as possible may then be necessary for the economic viability of the logging operation.

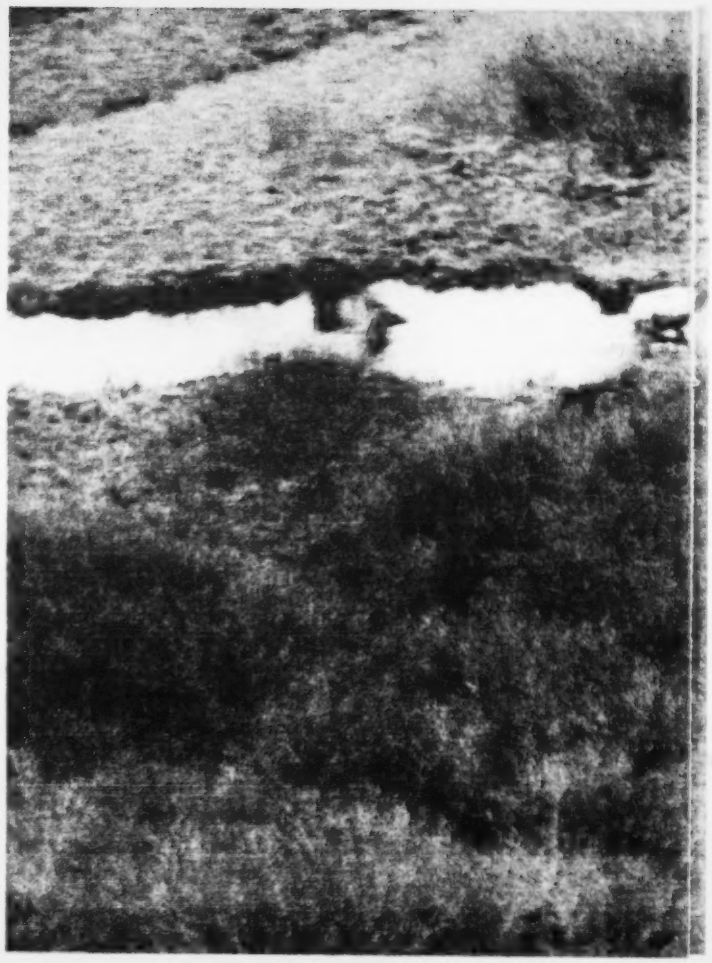
Ideally, mature timber can be incorporated into firebreaks and for use as wildlife corridors, patterns of clearcut can be centred around a focus of old-growth timber and cut in a sequence to offer a diversity of habitat. But, unavoidably, logging alters habitat which affects the stability of animal populations.

As the mature stands were liquidated along the east coast of Vancouver Island and logging moved further back and farther up, the boom in deer populations which resulted from the sudden increase in forage and lasted about 20 years began to fall and stabilize at lower levels as the second-growth forests, thick and inaccessible, grew up. It is a point of contention as to whether a net loss has resulted, down from the original numbers thought to have existed in the mature forests.

Recognizing that habitat diversity, including the maintenance of mature stands, is necessary for optimizing deer, wildlife managers urge a longer duration of cut in areas of high capability for their resource. In other words, even though a Douglas-fir forest could be harvested every 80 years, wildlife managers would prefer to see that time extended to beyond a century so that stands of mature timber could be left while logged areas go through a green-up period geared more to the needs of animals. As second-growth reaches the age when it can provide cover, then cutting could continue elsewhere. In the end, there would still be some mature stands left.

Naturally, this requires a trade-off. If timber values are to be maximized, the ideal would be a 'normalized' forest of approximately the same age and species, harvested in large sections where environmentally acceptable. Hence no more mature timber. And so the conflict.

In an area like Vancouver Island, where resource extraction was first pioneered in the province and where demands from a multitude of users are intense, the limits have been reached. It is no longer possible to provide everyone with the best of everything. Naturally, the type of planning proposed or underway aims for the best possible compromise, but some of the basic decisions on the resource mix, commitments to



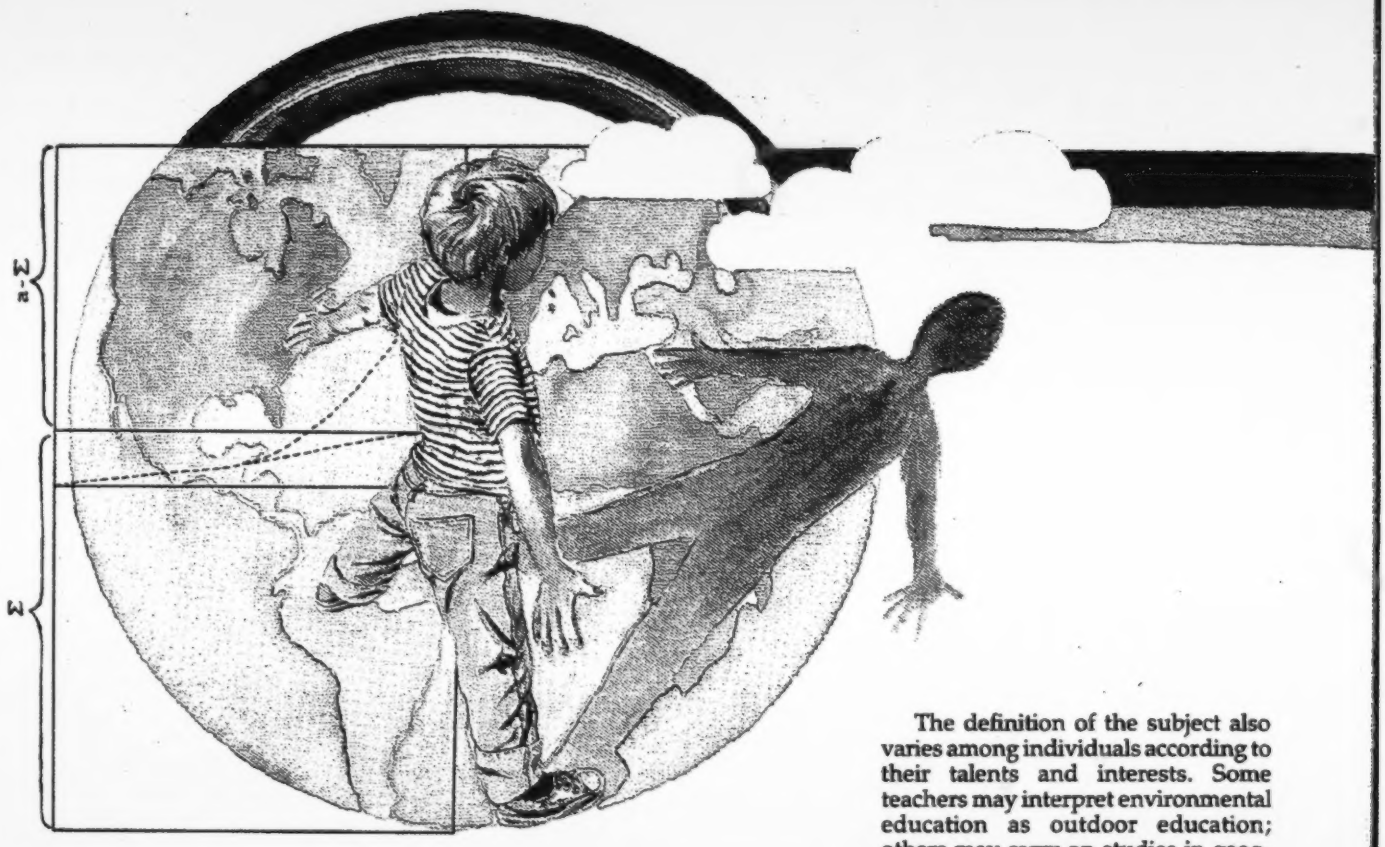
(above) A herd of Roosevelt elk. Few people realize they are native only to Vancouver Island. (left) A trimmed stand of Douglas-fir in the Sayward Forest. Only 400 trees to the acre, it's a step toward intensive forest management.

users, and relative values of what can be optimized on the same land base often have to be made at the political level.

Where decision-makers meet is over the management plans for the second-growth forests of eastern Vancouver Island, which are just a few decades away from the next harvest. The reality of co-operation and conflict is most apparent in the Forest Service's Sayward Forest Management Project (see ForesTalk Vol. 1 No. 1) a choice that was really inevitable. The Sayward Forest represents a little over a tenth of the highly productive Douglas-fir biogeoclimatic zone, a habitat for deer perhaps second to none in all Canada. The rest, from Campbell River south, is almost totally controlled by private industry or alienated by a variety of man's activities. The government resource managers are without direct jurisdiction there.

The most urgent need in the Sayward is for thinning to increase groundstory for wildlife forage and visibility for the hunter and viewer. The timing and distribution of the deer harvest will be dependent on the logging procedures and integrated management of the remaining mature timber. But the opportunity for a return to flexibility means, perhaps, a stabilized and larger deer population that will set the precedent for the management in the future. The boom and bust cycle will at least be reduced and controlled.

Nature, of course, will stand dominate, delivering judgments with each snowfall on who and how many will survive. And man will respect the decision by adjusting his hunt to take about a tenth of the deer left after the season's mortality. But man the hunter will always play a far less significant role than man the harvester. The forest is so critical in the determination of animal habitat that the forester is, or should be, a partner with the biologist in the management of the wildlife resource. ✪



Environmental Education

by **Gerry Graham**
photography by Jim Challenger, Bob Gibson

The benefits of our times are astounding. Plastic heart valves, polio vaccine, laser beam surgery, space travel, and the world of communications are among the amazing feats we have come to consider commonplace. However, our advances are not without cost. Economic disparity, pollution, hunger, illiteracy, exploitation and domination are all much too prevalent among the nations of the world, even the seemingly rich ones.

The United Nations recognized these facts by establishing the United Nations Environment Program or UNEP, in 1972. Their objectives are within the realms of environmental education and environmental action. Their goals of environmental action are defined as "improving all ecological relationships, including the relationship of humanity with nature and people with each other." Their environmental education goals are "to develop a world that is aware of and concerned about the environment and its associated problems, and which has the knowledge, skills, attitudes, motivations and commitment to work individually and collectively toward the solutions of current problems and the prevention of the new ones."

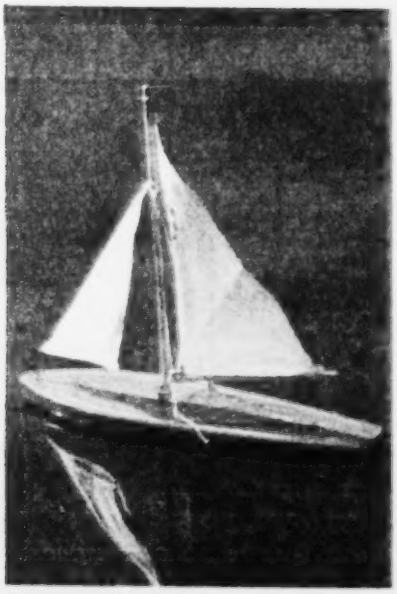
This organization is not solely responsible for the new awareness we are witnessing, but acts as an international focus for those who are engaged in or interested in the field of environmental education and offers universal definitions and objectives. This in turn creates a common ground for these people. But their methods of achieving these goals vary greatly from country to country and from region to region.

The field of environmental education is so new in British Columbia that there is no central theme or single source of leadership to provide common goals or methods. But each activity is valuable and each approach beneficial.

The definition of the subject also varies among individuals according to their talents and interests. Some teachers may interpret environmental education as outdoor education; others may carry on studies in geography or urban affairs. In fact, all activities in both these areas are correct. The outdoor educator has as much value as the urban studies teacher. The connection between supply and demand and the consequences of good and bad management go hand in hand with these activities. It's an education of awareness.

The first school district in British Columbia to appoint a full time environmental education co-ordinator was Kamloops. This is a large school district encompassing some of the most complete environmental education possibilities of any district in the province. There is a rapidly expanding city and suburban scene, a wide variety of primary and secondary industries, and the streams, mountains and forests in the area provide some perfect settings for nature studies.

Cam Murray, the person who until recently occupied this position states "individual teachers are the ones who are responsible for environmental courses. This is where it all must start. If a school board has a position like mine, then the person occupying that position can only help the teachers set up the courses. The rest is up to them. In many cases, the parents who are experienced in one subject or another

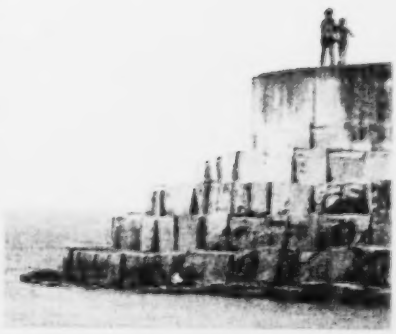


offer assistance as volunteers."

This school district has an outdoor education centre at McQueen Lake near Kamloops for use by the teachers and others. It was established through hard work and the generosity of local businesses and organizations, individuals, and various levels of government.

Kamloops is not alone in the field of environmental education. There is some form of environmental program in most school districts. And many have outdoor centres of a permanent nature. But teachers don't have to take a class outside to facilitate this kind of education; there are many tools available, ranging from books and movies to pre-packaged courses and games. Most are developed locally through government agencies, industry or university education facilities. At this level, there seems to be an increasing amount of information and packages reflecting new awareness.

The Information and Education Branch of the Ministry of Recreation and Education has developed a package for outdoor education consisting of job cards for the students, and directories for the teachers indicating various locations in the province



where the studies can be practiced. The package, called 'Encore' has been widely used by teachers throughout the province. It costs $25 and is available through the branch in Victoria. Rod Cameron, Director of the branch, feels strongly about packaged courses; "Encore and programs like it will help teachers until the long term need for recognition in this field is achieved." More good examples of tools available to teachers are being developed through the Vancouver Environmental Education Program (VEEP), under the direction of Dr. Kip Anastasiou. Here teachers are developing programs for teachers. They have developed a series of booklets, each specializing in a different subject ranging from estuary studies and forest nurseries to gas stations. Most of the work is in conjunction with and through the financial assistance of industry and government ministries.

Another aspect of VEEP's work takes the form of games. They have created a game which teaches children the Vancouver and Victoria bus systems, another, the life cycle of salmon, a mining game and are now working on a game in conjunction with the Ministry of Forests which teaches the principles of integrated resource management. Their programs are available through the B.C. Teachers Federation or through the VEEP offices at the University of British Columbia. VEEP also issues an informative newsletter about their publications and activities.

More programs and packages are available to teachers and individuals through industry. Many of the corporations involved in the extraction of our resources, and secondary manufacturing, produce booklets, movies and posters that are highly useful to the environmental educators. Some are strictly public relations tools, but there are cases where an honest con-

cern and effort is expressed through the development of education programs.

But teachers and groups need more than packages and tools to develop meaningful courses. More and more teachers are using their summers to learn about the subject. Some courses even qualify for university credits. All the universities and community colleges are offering courses or have gone further by appointing people who are concerned strictly with this aspect of teacher training.

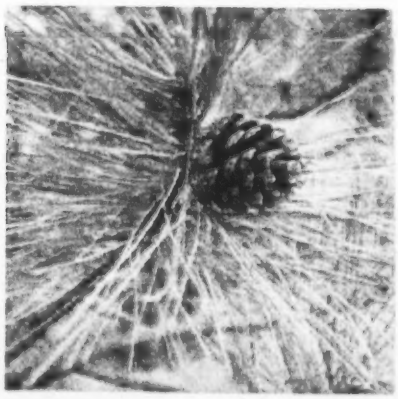
Dr. M. McClaren of Simon Fraser University is the Director of Professional Development, Faculty of Education. He conducts a course for teachers each summer in Kamloops. Last summer, they studied the city by taking walks through neighbourhoods and experiencing city politics. They went on wilderness hikes, studied the beef industry and more. The objective, according to Dr. McClaren, was to study Kamloops as a resource user, and show teachers how to develop curricula focusing on man and nature. "In this type of study people should show the correlation between supply and demand. This is only partially achieved through narrowing the field to one subject or

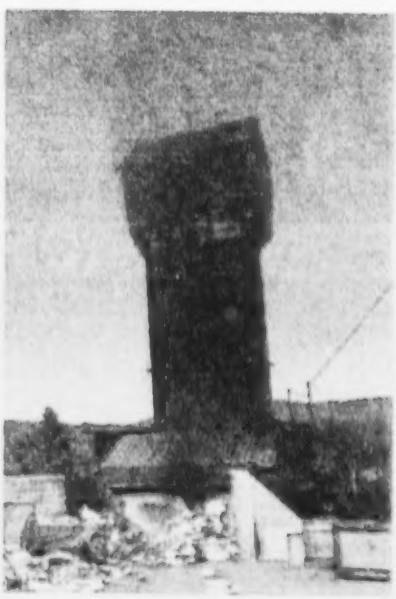
another. Our needs come from nature but our decisions are made in an urban environment, and to produce better consumers and decision-makers, the connection between the two should be made clear. There's little value in standing outside a government building protesting the slaughter of whales, wearing lipstick made from a whale oil base."

Another course available to teachers and others takes place in Strathcona Park on Vancouver Island. It is sponsored by a non-profit society and is basically concerned with the development of outdoor skills and the type of attitudes this kind of activity generates. A teacher who is at home in the wilderness will be much better equipped to teach courses about the outdoors.

Outdoor courses run by private interests or organizations are quite common in British Columbia. They are not strictly designed for teachers, although teachers can benefit greatly from them. One of the more familiar examples is 'Outward Bound'. Their outdoor course is offered to young people with the objective that if an individual can overcome the obstacles and problems related to the vigorous physical and psychological aspects of the course and apply this to everyday life, the benefits will be tremendous. It's all in a wilderness setting and can last up to four weeks.

Another aid to the outdoor educators is an organization called 'Outdoor Educators of British Columbia'. This group acts as a focus for the teachers who are involved in this aspect of environmental education. They issue a newsletter which is a valuable tool. The president of the organization is Dr. David Bateson, who is in the Science Education Department, University of British Columbia. He and other members of the organization compiled a report on outdoor





education in the province. It outlines every aspect of the subject and is probably the most useful compilation on the subject.

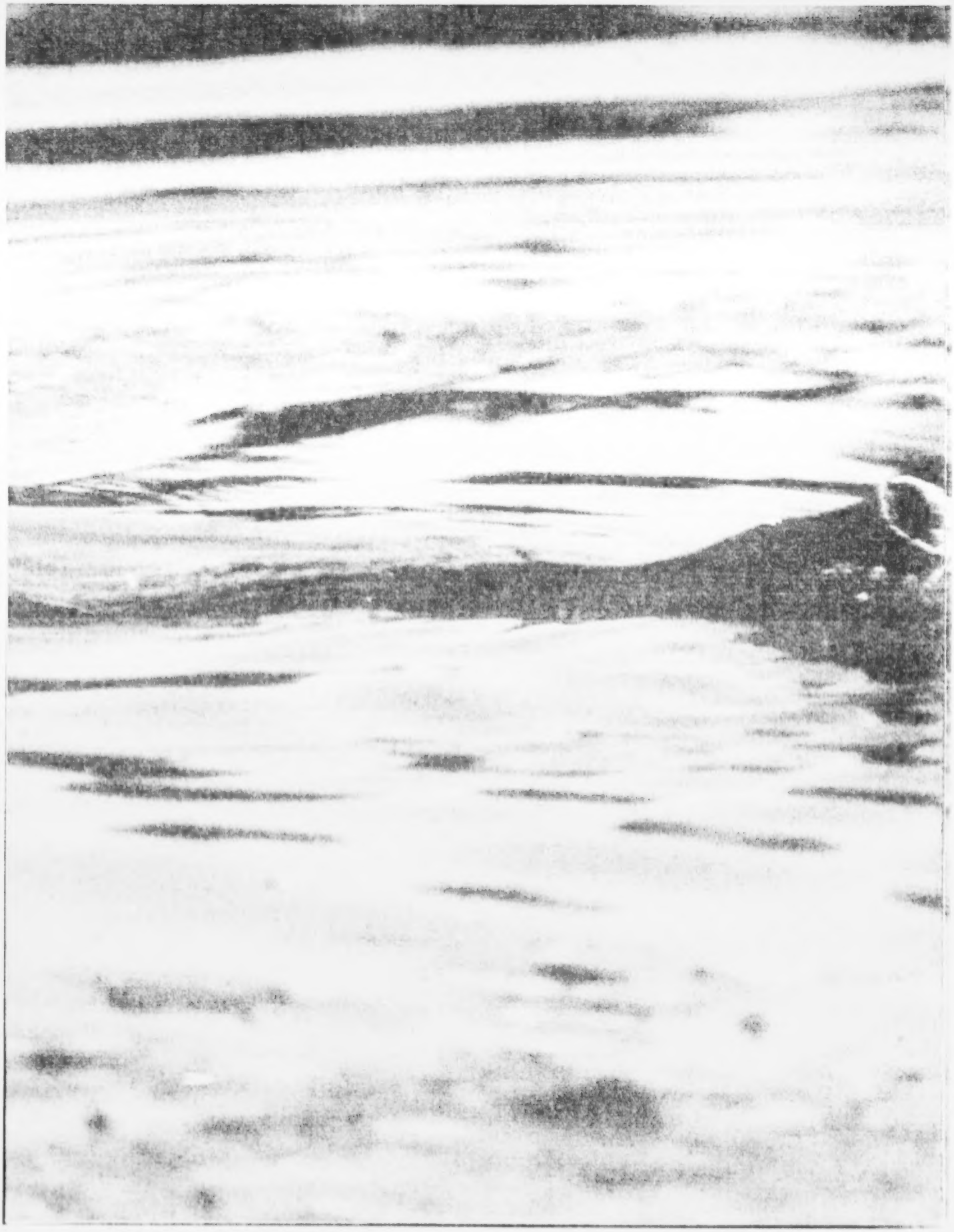
Environmental education throughout the province is still in the embryo stage. Efforts are evident everywhere and the people who are involved are intelligent, hard-working individuals with a purpose. They feel very strongly about the whole issue which is evident in the results achieved to date. Locations for use by schools and the general public are appearing everywhere as a result of these efforts. They range from a path through a forested area to the larger scale environmental centres complete with living facilities and major buildings. An interesting example of this is the Cowichan Valley demonstration forest established last May and covering 5,000 acres of outdoor classroom near Lake Cowichan on Vancouver Island. It is the result of co-operation and effort by a number of ministries and businesses. More information is available from the Ministry of Forests in Victoria.

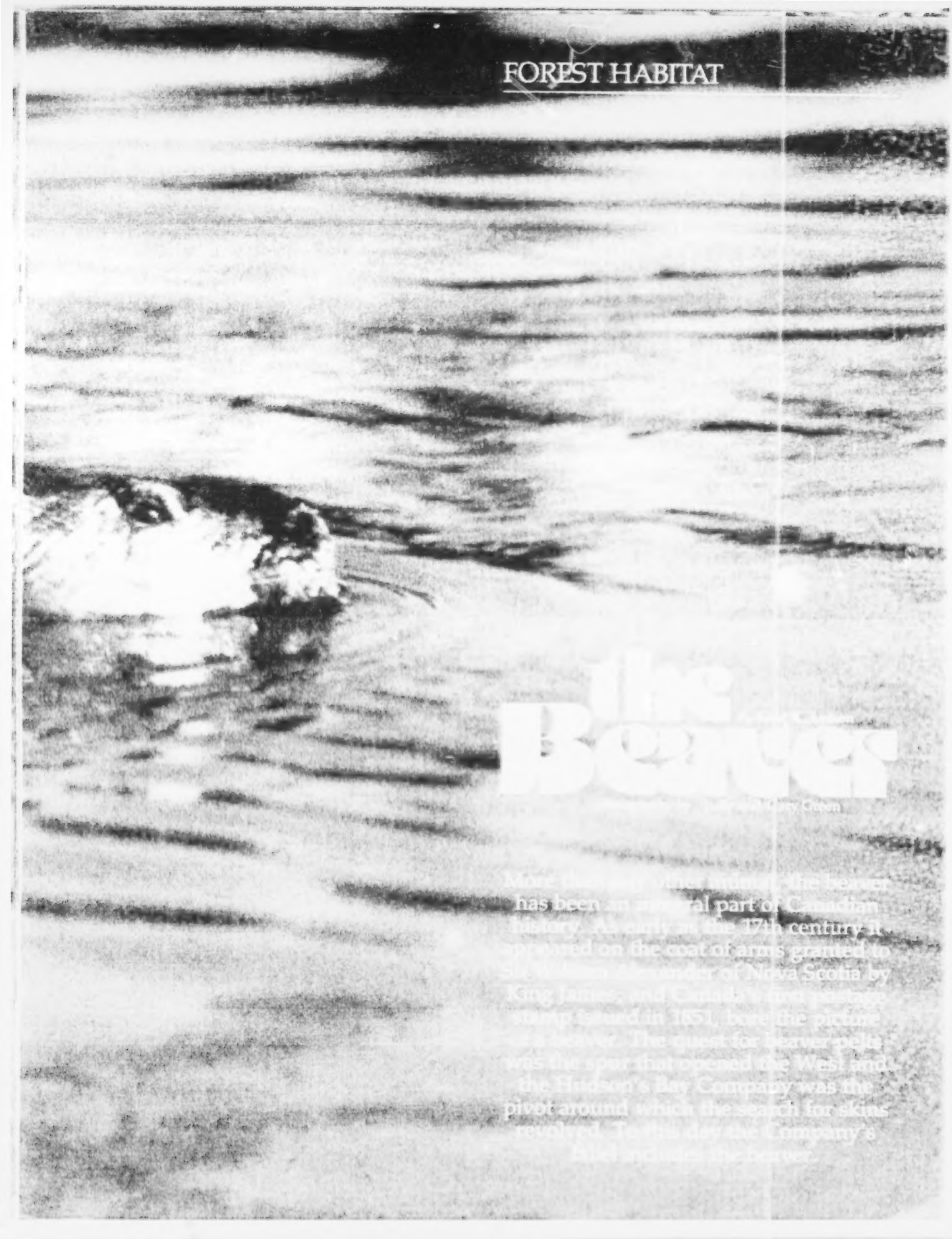
Media also is very much part of the environmental education scene by its very nature. Mike Halleran, an outspoken resource journalist whose work appears on CBC, expresses his thoughts on the subject. "Media does have a responsibility to report, entertain and educate. But the main emphasis, because of competition, is based on entertainment value. In the field of education, we can only arouse the curiosity of the public and hope that they will investigate the subject further."

"It's very difficult to separate the environmental issues from the social issues. We can only report specific events because it's extremely difficult to provide an overview without establishing a stand or expressing an opinion."

Environmental education is everywhere. All the universities and community colleges are involved. Industry to a certain extent and some of the government ministries are also involved in the effort to interpret what is around us in imaginative ways never thought of by previous generations of educators. Clubs and other organizations exist in every community who concern themselves with this subject. It seems that everyone is jumping on the environmental band wagon. It's about time.

Environmental education is a broad subject, covering a wide scope of interpretation and activities. To present all aspects of this complex topic was not impossible. As a service to our readers, we are preparing a list of organizations, offices and government ministries active in environmental education. In future, we hope to add to this list, keeping it current and complete. For your copy, write Environmental Education, Forest Service Information Division, Ministry of Forests, Legislative Buildings, Victoria, B.C. V8V 1X5. *Editor*





Before the trappers, however, the beaver was recognized as an important cohabitor of the land with man. Indians across the continent used the beaver in both decorative and heraldic designs. In British Columbia the animal figures prominently in the crests of the Tsimsyans as well as the Haida.

The word "beaver" is derived from the old Anglo-Saxon word "beofor", but reference to them is found as far back as the time of Egyptian hieroglyphics. This may come as a surprise to those who consider the beaver to be exclusively a North American mammal, but the original beaver was a massive, 700 pound animal which inhabited Europe, and most of Asia as well as North America some one million years ago. From these early animals stemmed the beaver of today which is only some sixty pounds in weight.

Until the middle of the 19th century, the beaver was trapped in unbelievable numbers with no regard to conservation. Fashion ruled the market and the market demanded more and more pelts for the making of men's top hats. It was discovered in the 1840's that silk could be as easily, and attractively, used for hat-making as beaver fur. This gave a much needed reprieve to the overexploited beaver but did not halt the trade entirely. By 1900 the beaver had completely disappeared from many parts of Canada. But shortly thereafter protective measures were introduced by wildlife management agencies and the beaver population began to increase rapidly.

The superb dam building and water impounding skills of the beaver are its greatest contribution to our economy and wildlife requirements. We tamper with their natural role at our peril. Several years ago, two trappers in an Oregon farm community removed six hundred beaver one winter, with the result that in a few years the ponds and grassy meadows disappeared, farmers had to dig wells for their water and further down the reaches of what had been a creek, the land reverted to desert. In British Columbia, beaver activity sometimes results in valuable timber land being flooded, roads and rail lines washed out, but by and large beaver benefit man by damming streams near the headwaters of rivers and thus in many instances, preventing floods. The beaver does a much better job of dam building than man, and much cheaper!

The ponds formed by their dams lead to an increase in trout; offer ideal conditions for wildlife; drinking water for cattle and at times provide precious water to halt forest fires. A dramatic example of the animal's usefulness occurred when the storage dam at Canada's Chalk River atomic energy plant failed. Two beaver were brought in to mend the leaking dam. They did an excellent job and the structure was soon watertight.

When a young pair of beaver, in their second year, are driven out of home by their parents, the first thing they do is build a dam. They then build themselves their own lodge with rocks, pieces of sod and sticks held together with mud. Surely the originator of reinforced concrete! The lodge will eventually rise above the water for some six feet. Inside is an air chamber which has an elevated floor through which there is a plunge hole into the water beneath. The adults sleep on the floor while the kits, usually four in number, sleep on a mattress of grasses, leaves and twigs. The vegetation is eventually eaten by the residents of the lodge.

Beaver are completely vegetarian, cutting down deciduous trees with their incredibly sharp and ever-growing incisor teeth. In the fall they cut the logs into suitable lengths and take them to the pond, where they are submerged and held in place either with stones or by ramming them into the mud. This is the beaver's winter supply of food. When the pond freezes over, the beavers leave the lodge by the plunge hole, swim down to their "larder", bring back a suitable piece of log and eat the bark, "corn on the cob" style.

Fortunately, Canada's symbol has been spared extinction. Perhaps it was Grey Owl's book "Pilgrims of the Wild", published in 1935, that brought this fascinating rodent to the attention of many. He wrote in the epilogue to his book "And here they will always be, in the peace and quietness of their silent lake amongst the hills, till they pass on in the ruliness of time to join the hosts of their brethren who have gone before them, leaving behind them others in their stead who may perpetuate, in each their turn and for all time to come, the ancient and honourable traditions of the Beaver People". ◻

ForesTalk

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Ministry of Forests

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